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 TITLE: Synthetic flux-promoting polyether models: cation flux  
 dependence on polyoxyethylene chain length  
 AUTHOR(S): Espinola, Carmen G.; Delgado, Mercedes; Martin, Julio D.  
 CORPORATE SOURCE: Instituto de Investigaciones Quimicas, CSIC, Seville, 41092, Spain  
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AB A novel class of cyclic polyoxyethylene derivs. incorporating a polybenzylated oxane system has been prep'd. via ruthenium-catalyzed ring-closing metathesis. These polyethers were incorporated into phospholipid vesicles and shown to facilitate transmembrane sodium transport. Maximum efficiency in sodium flux occurred when polyoxygenated

chain lengths were similar to the leaflet thickness in bilayers. It is proposed that polyethers dimerize in order to function. The assocn. consts. of these polyethers with alkali metal cations and Me ammonium ion have been evaluated using Cram's picrate extn. method.

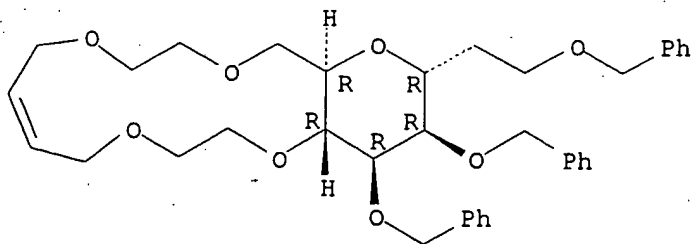
IT 364764-67-0P 364764-68-1P 364764-73-8P,  
 preparation 364764-74-9P, preparation 364764-75-0P,  
 preparation 364764-76-1P, preparation 364764-77-2P,  
 preparation 364764-78-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of cyclic polyoxyethylene derivs. of polybenzylated oxane as transmembrane sodium transport facilitators in phospholipid vesicles)

RN 364764-67-0 CAPLUS

CN D-glycero-D-manno-Octitol,  
 2,6-anhydro-1,3-O-[2-butene-1,4-diylbis(oxy-2,1-ethanediyl)]-7-deoxy-4,5,8-tris-O-(phenylmethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry unknown.

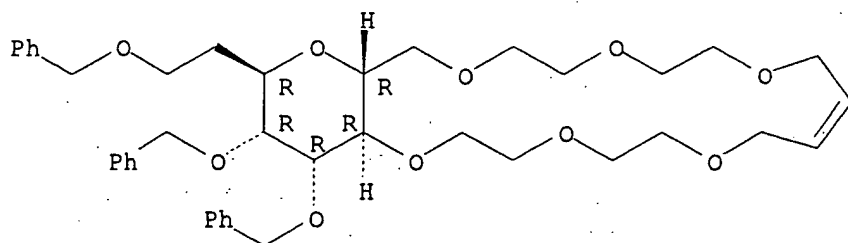


RN 364764-68-1 CAPLUS

CN D-glycero-D-manno-Octitol,  
 2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-  
 1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



RN 364764-73-8 CAPLUS

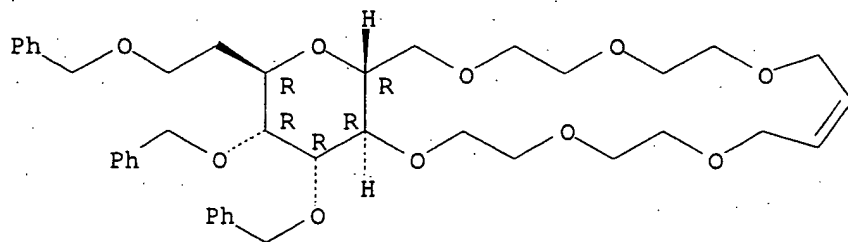
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with lithium ion  
(Li1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Li<sup>+</sup>

RN 364764-74-9 CAPLUS

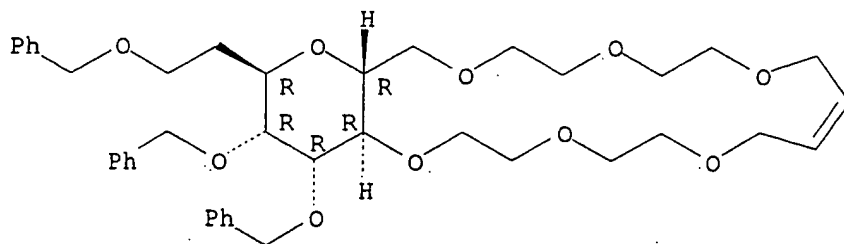
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with sodium ion  
(Na1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Na<sup>+</sup>

RN 364764-75-0 CAPLUS

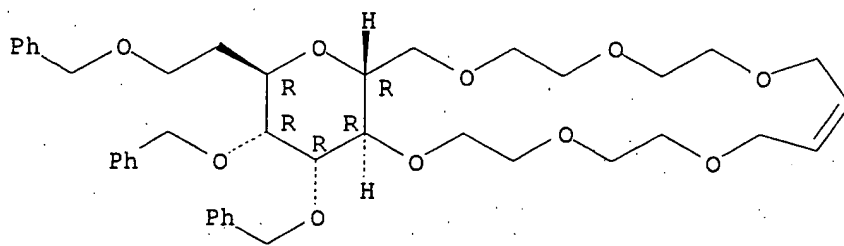
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with potassium  
ion (K1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● K<sup>+</sup>

RN 364764-76-1 CAPLUS

CN D-glycero-D-manno-Octitol,

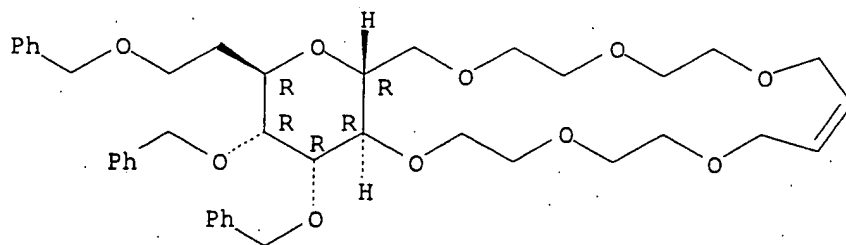
2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with rubidium  
ion

(Rb1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Rb<sup>+</sup>

RN 364764-77-2 CAPLUS

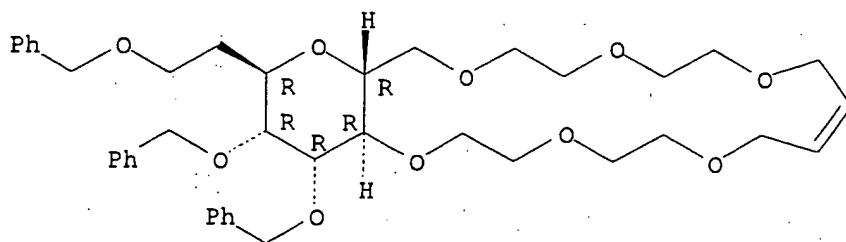
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with cesium ion  
(Cs<sup>+</sup>) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Cs<sup>+</sup>

RN 364764-78-3 CAPLUS

CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with methanamine  
(1:1) (9CI) (CA INDEX NAME)

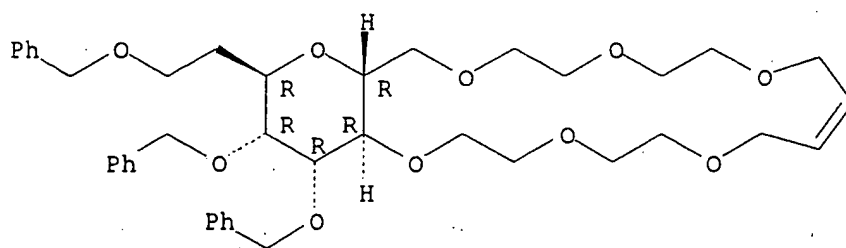
CM 1

CRN 364764-68-1

CMF C41 H54 O10

Absolute stereochemistry.

Double bond geometry unknown.



CM 2

CRN 74-89-5  
CMF C H5 N

H<sub>3</sub>C-NH<sub>2</sub>